



California Department of Health Services Institutions Program

Public Health Fact Sheet

Hantavirus pulmonary syndrome

What Hantavirus pulmonary syndrome?

Hantavirus pulmonary syndrome is a rare, but often fatal, disease of the respiratory system caused by a virus transmitted to humans through the urine, feces and saliva of wild rodents.

Who gets Hantavirus Pulmonary syndrome?

Anyone of any age can become infected with Hantavirus. A number of the cases reported were individuals in excellent physical condition.

How is it spread?

The disease is transmitted to humans through the urine, feces, and saliva of wild rodents primarily the deer mouse but not necessarily limited to that species. The most widely reported conditions associated with the transmission of the disease is cleaning or occupying confined spaces lacking adequate ventilation that are heavily infested with rodents. Also, direct contact with rodents (bites, saliva) has been implicated in the transmission of the disease.

What are the symptoms?

The illness starts with flu like symptoms, including fever, headache, muscle ache, and vomiting or diarrhea. After the first phase of the disease, shortness of breath and coughing usually appear. In a significant number of cases the disease progresses rapidly to respiratory failure and death. Symptoms usually appear one to five weeks after exposure to the rodents.

What is the treatment?

There is no specific cure for the disease. The course of treatment is usually supportive, attempting to maintain the respiratory system while the body's immune system attempts to fight off the virus.

What can I do to prevent infection?

Good sanitation is the key to preventing and controlling rodent infestations.

Measures you should undertake include:

1. Rodentproof – Thoroughly inspect exterior of structures for any openings or spaces that would allow rodent entry. Typical routes of entry include poorly sealed crawl spaces, areas where piping and wiring enter buildings, and doors that fit poorly. One-quarter inch openings will allow rodent entry. Access to roofs should be prevented by trimming back foliage and removing or modifying any other means of access. Roofs should be inspected for signs of rodent activity or damage in such areas as overlapping rooflines. Openings should be sealed with steel wool, metal flashing, or concrete. Deteriorated foundations should be properly repaired.
2. Cleaning – Keeping structures clean, especially in food services areas goes a long way toward controlling rodent problems. Rodents will be discouraged from occupying structures unless there is a source of food and water. Cleaning to remove food sources and storing food in rodent-proof containers or six inches above the ground is a very effective means of discouraging these pests. Also all areas of buildings should be inspected to locate problem areas and appropriate action taken to discourage rodents.
3. Physical and chemical control – Traps, glueboards, and EPA approved rodenticides should be used continuously to kill rodents. Constant monitoring is essential for maintaining control. Gloves should be used when removing dead rodents.
4. Outdoors – Clear brush, grass, and junk away from the building foundations to eliminate a source of nesting material.

Safety precautions for cleanup

Remember that hantavirus is transmitted primarily by inhalation of dust contaminated with virus from rodent secretions. Therefore, it is very important not to disturb and stir up materials into the air while cleaning. Taking the following safety precautions will reduce the risk of infection from cleanup:

1. Ventilate the area to be cleaned the night before by opening doors and windows.
2. Use rubber gloves.
3. Use sanitizers such as bleach at maximum recommended concentrations to dead rodents, rodent droppings, nests, contaminated traps, and surrounding area and allow 15 minutes contact time before removal.

4. Clean the affected area with a sponge or mop. DO NOT SWEEP OR VACUUM.
5. Double bag the disinfectant – soaked rodent and cleanup materials (newspaper, paper towels, etc.) securely in plastic bags and seal.
6. Wash gloved hands in disinfectant and then in soap and water.
Thoroughly wash hands with soap and water after removing the gloves.
Dispose of gloves and cleanup material with other household waste.

How can I get more information?

Contact the Department of Health Services, Institutions Program at (916) 445-0498 or visit the website at: <http://www.dhs.cahwnet.gov> or the U.S. Centers for Disease Control at <http://www.cdc.gov/>